ERRATA

PERMITS

for Work and Structures in, and for Discharges or Deposits into Navigable Waters

Page 1-19 in Part III of the pamphlet are replaced by the attached pages 1-20.

The Parameter Analysis table and references on pages 76-83 are replaced by tables which accompany Parts A and B of ENG Form 4345-I and information in the attached sheets.

Table B of the pamphlet (pages 84-85) is replaced by the list on page 3 of ENG Form 4345-1 (May 71). Table C of the pamphlet (at page 86) is replaced by Part A of ENG Form 4345-1 (May 71).

Part B, and accompanying tables, of ENG Form 4345+1 (May 71) is under preparation, and will be sent to you as soon as available.

Part B, which will follow very closely the additional quantitive information specified in the April 71 version of ENG Form 4345-1 and Table D of the information pamphlet, must be furnished to the respective Corps of Engineers District Office by 1 October 1971.

I. Introduction.

ENG Form 4345 will be used for all Corps of Engineers permit applications. There will therefore be some questions on parts of the form which need not be filled out by each applicant; however, an applicant should respond to each item until specifically directed otherwise in the discussion below. Similarly, the response to most questions can be in general phrases but others must be in a specific and abbreviated form. Therefore, to avoid loss of time because of returned forms, follow carefully the instructions below.

An applicant need submit only one original copy of a completed ENG FORM 4345 for each facility for which a permit is sought. Where a discharge or deposit is involved, however, a separate Section II, pages I thru 3 of ENG FORM 4345-1, entitled "Plant Process and Discharge Description", must be submitted for each of the several distinct discharges from that facility. Many applicants whose discharges are of a "non-critical" type will need only to fill out a highly simplified version of Section II, as is explained in the following materials.

Other supplementary information which may be required by the District Engineer to evaluate fully an application must be submitted by the applicant upon request from the District Engineer.

Detailed instructions for filling out the form comprise the remainder of this material. Any problems which arise in completion of the form should be discussed with the appropriate office of the District Engineer in order to arrive at a mutually agreeable solution.

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- II. Item by Item Instructions.
 - A. Section I. General Information (ENG FORM 4345).

Item 1.

- a. "State" refers to the State in which the activity described in the application is occurring presently or is planned to occur. If more than one State is involved list that State in which the majority of activities will occur.
- b. Use the same two-letter abbreviation for state names as is used by the U. S. Postal Service.
- c. The box labeled "Application Number" will not be completed by the applicant.

Item 2.

The "applicant", as the term is used in these instructions, is the person, agency, firm or other entity which owns or operates the facility or activity for which a permit is sought. The person signing on behalf of the applicant will therefore often have a different name.

- a. The applicant is generally the one for whose benefit a permit activity is undertaken. Thus, where any discharge is expected to occur, the applicant is the one who creates or controls the discharge or deposit. Similarly, where construction, dredging or other work is involved, the applicant is the owner or operator of the facility for whose benefit the construction is undertaken. In all cases the applicant's full legal name should be used.
- b. The person who signs the application form will often be the applicant himself; when he signs on behalf of the applicant, his title or relationship to the applicant should be shown in the space provided in Item 2. In all cases, the person signing the form should be authorized to do so by the applicant.

General signature requirements are stated on page 1 of ENG Form 4345.

Where an application involves a discharge, the person signing on behalf of a municipal, county, or intra-State regional governmental unit must be the principal executive officer of that unit; if the applicant is a State or multi-State agency, the application must be signed by that agency's principal executive officer or one who reports directly to him and is authorized tomake applications on behalf of the governmental unit. Applications submitted by an agency of the United States should be signed by an official who is authorized to evaluate environmental factors on an agency-wide basis.

Applications for dredging permits may be signed by the owner or proprietor for whom the proposed work will be beneficial or his duly authorized agent, who may be the dredging contractor. When the agent submits the application, each such application may include the work of more than one client provided the character of the work of each client is similar, in the same general area, and contiguous to a Federal project. If submitted by an agent, the application will be accompanied by a statement by each owner designating the applicant to act as his agent, and agreeing to furnish, upon request, supplemental information to support a determination that the proposed work is in the public interest, to include information on alternatives available and the impact of these alternatives in relation to the proposed work on the operating effectiveness of the facility to be served. The supplemental information required above usually would not be required where dredging activities are conducted (a) to maintain non-Federal dock and berthing facilities adjacent to authorized Federal projects, or (b) to increase depths in said facilities to correspond with increase in depths on an authorized Federal project.

Item 3.

Use full mailing address of the applicant's main offices. This often will not be the same address as is used to designate the work or activity (see Item 9).

Item 4.

The Corps of Engineers or other Federal agencies involved in permit applications may, in the interests of expediting the application process, need to confer with a person who is thoroughly familiar with the facts reported on the form. This person, although not usually the same as the signing official, is of course nevertheless subject to the provisions of law quoted below the signature line on page 1 of ENG Form 4345.

Item 5.

Use the date on which this application form is filled out. Do not use the date of earlier or original applications for the same activity.

Item 6.

Applications may require revision because of changed circumstances or the need to report proposed or revised requirements which affect the work or discharge. The "a" box should be checked only where the application is the first to describe its subject matter. Check the "b" box for all revisions or supplements, and fill in Item 7 as well.

Item 7.

Respond to Item 7 only if you checked box "b" in Item 6. Fill in the number which was assigned by the Corps of Engineers to the original application. This number is given to all applicants when the Corps acknowledges receipt of their original application.

Item 8.

The full name of the facility where the proposed discharge, construction, or activity will occur, or presently exists, should be used. If there is no "facility", use a project name or description number.

Item 9.

The mailing address of the facility will often be different than that reported in Item 3. If no "facility" or mailing address exists, use a brief description of the location of the project site.

Item 10.

"Adjoining property owners" are those whose lands adjoin the lands upon which will occur the activities described in the application. Only those adjoining property owners whose lands also adjoin the waterway need be listed. A mailing address at which the owners may reasonably be expected to be reached must be furnished.

Item II.

The applicant should carefully examine his proposed or present activities in order to determine the full extent and nature of the work undertaken. Because some construction, dredging, or discharge may incidentally occur as part of any other activity, several boxes in this item may be checked.

- a. Dredging. Check box "a" if any dredging will occur during any stage of the proposed activity.
- b. The term "construction" incorporates new and existing structures as well as a wide variety of activities, including filling, diking, or the similar placing or erection of any substance or structure within or in close proximity to the waterway. It also includes any modification or expansion of a waterway, accomplished by digging, cutting, or other earth moving or similar work. Any structure, no matter how small, used to conduct or disperse a discharge is included within "construction."
- c. Box "c" should be checked whenever both construction, as defined above, and some discharge will occur.
- d. "Discharge only" refers to cases in which a liquid is diacharged into a waterway without the aid of any structure or defined water course. Wherever such a structure or conduit is involved check box "e" but do not check box "d".

Item 12.

An activity is considered to be of a temporary nature when the applicant intends to dismantle any structures or cease that activity in furtherance of some other goal, or in any event within a period of two years. An activity is not "temporary" if it occurs sporadically (as is the case with many discharges) and is expected to continue for some period in the future.

Where the temporary activity is a discharge, include in the answer the "discharge serial number" which has been assigned to that discharge (see item 5 in Section II below).

Item 13-15.

If boxes "c" or "d" were checked in Item 11 the applicant must complete Items 13, 14, and 15.

Item 13 refers to the volume of intake water used in the processes which result in the particular discharges described in the form. List the total of the intakes related to the several discharges described by the form.

Item 14 should be used to describe the processes or uses of water within the plant.

Because discharges into navigable waters will be more fully described in Section II of the application (ENG FORM 4345-1), Item 15 refers only to other discharges which might also occur. Estimate their volume in units of million gallons per day or fractions thereof. Thus, a discharge of only 10,000 gallons per day would be .01 mgd.

Item 16-18.

Information must be furnished which will indicate precisely where the activity will occur for which a permit is sought. That location may be the same as the mailing addresses listed earlier in Items 3 and 9, but will often vary significantly. Thus, for example, a facility at one location may produce effluents which are discharged at another location. Be sure that the actual location of the activity is correctly noted. Item 18 may be marked "N/A" where the activity is definitely not within the legal boundaries of a city or town (but if within a recognized unincorporated community, use that name.)

Item 19.

Use the name of the waterway by which it is usually designated on published maps of the area. If possible, refer to one of the map series published by the U. S. Coast & Geodetic Survey.

Items 20-21.

Basic features of each application are the maps and plans which show the location of the activities for which a permit is sought, and the general characteristics of any structures involved.

Those drawings are attached to and form a part of the application, and if granted, the permit, and must be prepared in the form described. The detailed information required on the drawings will vary, depending on the particular activity for which application is made.

a. Dams.

Number of copies required. Four sets of drawings will be furnished, one set of which will be on tracing linen, vellum, or heavy tracing paper.

Sizes of drawings. The drawings will be on sheets 8 by 10-1/2 inches in size measured from edge to edge with a margin of 1 inch along the top 8-inch side for binding purposes. As few sheets will be used as necessary to show clearly what is proposed.

<u>Title of drawings</u>. Each drawing will have a simple title, in the lower right-hand corner, to identify the structure.

Location Map. A map on a small scale showing the location of the structure is always required, unless the other plans submitted clearly show the general location. The location map may be on a separate sheet, or may be drawn as an inset map on a corner of the sheet showing the details of the structure. It may be traced from a Coast Survey, Lake Survey, or Geological Survey chart, road map, or other general map, and will bear a note showing the number or title of such map or chart, thus: "Traced from U. S. Coast Survey Chart 273." The name of the waterway and the names of the towns and prominent points will be placed on this map, and any lines of latitude or longitude will be included on the map and identified. The location of the structure will be marked in red ink on all copies of this map.

Special instructions. All drawings must be drawn to scale and the scale will be shown graphically. The plan of the structure will show the high and low water lines on both banks of the stream. A typical cross section of the structure will show the type of construction and elevations of its pertinent features above the datum plane. Soundings and elevations will be shown in feet and referred to the established Government datum at the locality. The direction of the current will be indicated by an arrow. All maps must have the usual meridian arrow showing the north. When two drawings are shown on the same sheet they will be drawn so that their meridians are parallel. North will be at the top of the map. The essential features covered by the application will be outlined in red.

b. Piers, discharge structures, dredging, and similar construction.

Preliminary consultation with District Engineer. As the employment of a competent engineer or draftsman often will be necessary for the preparation of the drawings, applicants are advised to consult with the District Engineer, by letter or in person, in order that they may avoid the unnecessary expense of preparing drawings that do not meet the requirements of the Corps of Engineers.

Number of copies required. One set of drawings on tracing linen, vellum or heavy tracing paper, and three sets of prints are required. In exception will be made to the rule requiring a set of plans on tracing linen, vellum or heavy tracing paper, when the map or drawing is a part of a printed map or plan which is sufficiently clear to permit reproduction by the photographic process; and, in ordinary applications for dredging, all four copies of the map may be prints, which often may be secured from the District Engineer at small cost. In all cases four complete sets must be furnished. If no discharge is involved, drawings are not required for minor construction in unimproved waterways or in areas of improved waterways which are removed from the fairway used for navigation.

Size of drawings. The drawings will be on sheets of 8 by 10-1/2 inches in size, measured from edge to edge with a margin of one inch along the top 8-inch side for binding purposes. As few sheets will be used as necessary to show clearly what is proposed.

Scales. All drawings must be drawn to scale and the scale will be shown graphically. All maps must have the usual meridian arrow showing the north. When two drawings are shown on the same sheet they will be drawn so that their meridians are parallel. North will be at the top of the map.

<u>Direction of current or tide</u>. On all maps of rivers, or plans showing river areas, the direction of the current will be indicated by a suitable arrow. In tidal waters the direction of the ebb and flood tides will be shown.

<u>Datum planes</u>. All soundings and elevations will be shown in feet, and referred to the established Government datum plane at the locality. This plane is usually:

On the Atlantic and Gulf coasts, mean low water.

On the Pacific coast, mean lower low water.

On the Great Lakes, low water datum or mean lake level.

On rivers, low water.

Location of bench marks. Plans for structures or for non-structural discharges in tidal waterways will contain indication of the tidal range. Further information, including the location and description of any gage or bench marks that may be available, may be secured from the District Engineer.

Proposed work in red ink. All proposed work should be shown on the drawings in red ink. This will be done neatly and carefully so as not to obscure any details of the drawings. If desired by the applicant, the colored lines will be drawn in at the District Engineer's office. In the event modification of an existing atomorphic is contemplated only the new work will be shown in red.

Title of drawing. Each drawing will have a simple title, in the lower right-hand corner, to identify the structure or work. The title should include a brief description of the activity, for example, "Proposed Pier in Smith River, at Brown City, County of Jones, Michigan;" the applicant's name; and designation of number of sheets.

Location map. The requirements are the same as described above under "a. Dams."

Detailed maps. The map of the proposed structure will show the shore line (both high-and low-water line) and any existing structures in the immediate vicinity. On rivers, the drawing will show the high-and low-water line on both banks of the stream. The depth of water in the vicinity of the proposed structure will be shown by soundings. Where practicable, the proposed work will be referenced by distance and direction to some established monument of definite mark. If harbor lines have been established in the locality, these will be shown accurately on the drawings. The outer lines of the proposed structure will be drawn in red ink on all copies.

Maps for pipes, cable, etc., under water will show the shore line (both high- and low-water lines), any existing structures, cables, etc., in the immediate vicinity and in red ink on all copies, the alignment of the proposed pipe or cable. The depth in the vicinity of the crossing will be shown by soundings. A note on the map will state the purpose of the pipe or cable and describe it sufficiently for its identification, as other installations of the kind may exist already or be placed in the same locality in the future. The profile will show the bottom from bank to bank, low, and high-water lines, and, in red ink on all copies, the proposed pipe or cable in the navigable channel will be shown in figures.

Maps and plans for overhead cables are similar to those required for under water cables. They will show in figures the minimum clearance of the lowest part of the cable above high water and above low water and the heights at supports.

Maps for dredging will show the area to be dredged, and the exact locality for the disposal of the excavated material. Both these areas will be drawn in red ink on all copies and suitably designated by words. Present depths on and in the vicinity of these areas will be indicated by soundings. The disposal area may be shown on the inset map or on a separate map if necessary. If the deposit is to be behind a bulkhead or other retaining structures, either in the waterway or on shore, the plans must be detailed sufficiently to show that the structure will be adequate to confine the material, or, where applicable, to prevent the return or leaching of the material into the waterway. The depth of dredging below the datum plane and the amount of material to be removed in cubic yards will be shown by an appropriate note.

Maps for dolphins, piles, etc., should how in figures the elevation of the tops of the piles or dolphins with reference to high water.

Plans of structures. A plan and cross section of all structures will be shown and in addition an elevation of the structure will be included, together with a profile of the bottom extending at least 100 feet beyond the end of the structure. A typical cross section of the structure will show the type of construction and show in figures the elevation of the deck or top above the applicable datum plane. The outer lines of the proposed structure will be drawn in red ink on all copies. The elevation of the deck or top above the datum plane will be shown in figures.

Plans for outfall pipes will show the shoreline (both high-and low-water lines), any existing structures in the immediate vicinity, and the vertical and horizontal alignment, the size, the length and the type of the pipe. The depths in the vicinity of the pipe will be shown by soundings.

Additional instructions. Additional instructions covering the requirements which may be made necessary by special conditions in certain localities will be furnished the applicant by the District Engineer.

Sample drawings. Samples of drawings are in the back of this pamphlet. It is not intended that the form of lettering, conventional signs, etc., must conform to these samples.

Item 22.

Numerous requirements of law govern the type of activities for which a Corps of Engineers permit may be required. Thus, the certifications required by Section 21(b) of the Federal Water Pollution Control Act and discussed above at page—shall be listed here, as should all approvals or denials issued by interested agencies. Where a certificate or description of impact has not been obtained, include a description of whatever applications have been made for such a doument. Applicants need list only those approvals or denials which relate to the activity for which a permit is requested.

Item 23.

April 3, 1970 was the effective date of the Water Quality Improvement Act of 1970, Public Law 91-224. Its provisions are now included within the Federal Water Pollution Control Act, the requirements of which apply to many of the activities for which permits may be issued. Check the box if the facility for which a permit is sought was in existence, or lawfully under construction, prior to that date.

Item 24.

The type of material dredged or used for fill should be described in terms which will identify its basic nature and characteristics. Examples of such descriptions might be "clean sand and gravel for commercial use," "river bottom sediment," or "sediment consisting of industrial wastes." The expected volume which is to be reported in cubic yards for the total project, should be measured by a specified method, some examples of which might be "scow load," "soundings," or "flow gages." A brief description of the proposed method of dredging should be included, for example, "pipe line," "clam shell," "drag line," etc.

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Solid matter may be deposited in a waterway as the result of construction, dredging, or other activity as well as by discharges of liquid material in which solids may be suspended or dissolved. Where discharges are involved, further information relating to solids will also be required in Section II of this application (ENG Form 4345-1). All applicants must provide a narrative description of the means by which the total volume of any solids will be measured, and also a description of the manner in which that volume of solids may affect the waterway. Developing technoligies in these fields allow the use of many methods and systems, which should be explained by the applicant using terms which indicate the basic nature of the methods used. "Effect upon the waterway" refers to both the temporary and permanent state of the solids; thus, the effect may be "flocculate and settle out," "remain in suspension indefinitely," or "remain in suspension temporarily but will settle eventually."

Item 26.

Rates and periods of deposition should be reported in whatever terminology best describes the particular activity. A rate may be reported in cubic feet per second (cfs) or million gallons per day (mgd). More detailed information on the quantity of solids will be required of some applicants by "Part A" of the form. "Periods of deposition" may refer to batch discharges which occur several times per day, week, or month, or continuous discharges which occur over daily, weekly or monthly periods.

B. Section II. Plant Process and Discharge Description (ENG FORM 4345-1)

General Instructions. All Applicants whose activities include any discharge must prepare Section II of the form, entitled "Plant Process and Discharge Description" (ENG Form 4345-1) for each present, proposed new, or changed discharge pipe or outfall. Separate descriptions of each discharge are required even if several discharges originate in the same facility.

Applicants whose discharges result from activities that fall within the industrial categories specified by the Standard Industrial Classification (SIC) codes listed on page 3 of Section II (ENG Form 4345-1) are required to submit more detailed descriptions of the contents of each discharge. Part A of the form (page 4 of Section II) will be used by those applicants to report essential characteristics of the discharge; as necessary, the District Engineer will make available to the applicant other parts of the application form which will be used to report on additional characteristics of that discharge.

- Item 1. Check the appropriate box to which this discharge description pertains.
 - a. Present. If the discharge has been or is occurring.
 - b. Proposed new or changed. If the discharge has not been or is not now occurring but is planned for some future date.
- Item 2. Check this box if the activity or discharge is subject to an implementation schedule imposed by a governmental body for the purpose of water quality control. If this box is checked, attach a narrative description of the schedule. Include in the description the name of the issuing governmental body, the actions to be taken, the relevant interim dates and the status of compliance with those dates. The date of full completion must be included along with a statement of belief of whether or not completion of the plan will result in compliance with applicable water quality standards. If construction of treatment facilities is involved, the interim dates must include, as appropriate, submission of preliminary and final plans, award of construction contract, initiation of construction, and date of completion.

Items 3-9. The information required by these items will be similar to that supplied in Items 9 and 16-20 of Section I. However, because discharges often occur at a different point than the process or activity which produces the discharge, the information supplied here relates to the specific point at which the described discharge occurs.

Discharge Serial Number. If you have more than one discharge, use a separate ENG form 4345-1 for each. Assign a three-digit unique serial number beginning with 001 for the point of discharge covered by the first description. Discharge serial numbers must be consecutive for each additional discharge described; hence, the second discharge serial number would be 002, the third 003, etc.

Latitude and Longitude. State the precise location of the point of discharge in terms of Latitude (Item 7) and Longitude (Item 8). Seconds need only be reported to the nearest ten seconds. This information will be supplied by the District Engineer if the applicant is unable to provide it.

Waterway. Use the name of the waterway by which it is usually designated on published maps of the area. If possible, refer to one of the map series published by the U.S. Coast & Geodetic Survey.

- Item 10. If an application has been made to a certifying agency requesting a certification of reasonable assurance of compliance with water quality standards or a description of the impact of the discharge on the receiving body of water, provide the date of application and the name of the agency. If application has not been made, print "not made" in the blank provided for name of Issuing Agency. If the certification or description has already been received, attach a copy when submitting this form and check the appropriate space.
- Items 11-16. Several items in the form refer to Standard Industrial Classification (SIC) code numbers. These may be found in the 1967 Standard Industrial Classification Manual prepared by the Executive Office of the President, Office of Statistical Standards, which is available from the Government Printing Office, Washington, D. C.

Copies are also available at District Offices of the Corps of Engineers, Regional Offices of the Environmental Protection Agency, and at most public libraries.

- Item 11. Provide a brief narrative description of the activity which is responsible for the discharge using the following terminology:
 - a. General process which best describes the activity. Use the language used in defining the Standard Industrial Classification (SIC) code if possible.
 - b. Specific process or method used.

EXAMPLES:

- a. General Process. Manufacture of synthetic resins and man-made organic fibers.
- b. (1) Specific Process. Manufacture of Acrylic Nitrile fiber.
 - (2) Specific Process. Production of process steam.

If this discharge is the result of activities described by more than one SIC code; enter a description for each activity. Use additional sheets if required.

- Item 12. Specify four-digit Standard Industrial Classification (SIC) code number which best describes the activity or activities responsible for the discharge.
- Item 13 or 15. For each SIC code listed in Item 12; specify either the principal products in Item 13 or the principal raw materials in Item 15. Only one of the items need be completed.
- Item 14 or 16. If Item 13 was completed, specify in Item 14 the amount of principal products produced per day. If Item 15 was completed, specify in Item 16 the amount of principal raw material consumed per day. Daily average figures are to be determined by dividing the yearly total by the number of days in one calendar year that the activity was actually operating.

EXAMPLE:

SIC 2021

Butter

200 pounds

Item 17. A batch discharge occurs when wastes are found or collected in containers and the contents of the containers are then discharged either from the plant or to the regular in-plant waste stream. Specify the average number of batch discharges per day.

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- Item 18. Specify the average volume (in gallons) per batch discharge.
- Item 19. If Item 1(a) was checked, specify the date the discharge began.
- Item 20. If Item 1(b) was checked, specify the date the discharge or changed discharge will begin.
- Item 21. Provide in this space a brief narrative description of the waste abatement practices currently in use which affect this discharge. Discuss those process changes, changes in raw materials, recycling methods, wastewater treatment equipment, and other techniques employed that contribute to waste abatement procedures in connection with this discharge. In addition, describe the scope and nature of wastewater abatement procedures at this plant using the codes for abatement practices and equipment which are listed below.

List the six-letter codes of the processes in the order in which the abatement measures are applied, so that they can be reconstructed into a flow diagram. For example, a facility using wastewater abatement procedures in the sequence; surface condensers, local trap, reuse of water, screening, neutralization, chemical treatment, chemical coagulation and sedimentation, sludge vacuum filtration, and land disposal, would be coded as: ESURFA, LOCALS, RECYCL, PSCREE, CNEUTR, CCHEMI, TSEDIM, SVACUM, SIANDD.

POLLUTION ABATEMENT PRACTICES - INDUSTRIAL WASTEWATER

IN-PLANT CONTROL MEASURES

E Series - Engineering Design Considerations

ESEPAR Installation of separate drainage systems
ESEGRE Segregation and collection of specific wastes

ESEGRE Segregation and collection of specific wastes
ESURFA Use of surface condensers in place of barometric condensers

EMERGE Emergency storage facilities

ECOUNT Countercurrent use of chemicals and/or washwaters

-EPUMPS Use of pumps and valves with special seals to minimize leakage

EOTHER Other

D Series - Process Design Modifications

DREACT Use of reaction chemicals or feed stocks producing minimum

waste

DCHEMI Chemical regeneration

DDOWNG Downgraded use of chemicals

DELIMI Elimination of air blowing and water washing

DHYSIC Physical separators

DCHANG Change in design basis for chemical recovery facilities

DOTHER Other

R Series - Recovery & Utilization

RECOVE Recovery of material for reuse in process

RDOWNG Downgraded use of spent chemicals in other processes

RUSEOR Use or sale of wastes as raw material for other processes

RECYCL Recycle or reuse of water

RHEATR Heat recovery

ROTHER Other

L Series - Local Pretreatment or Disposal

LOCALS Local separators and traps

LEVAPO Evaporation and incineration of noxious liquid wastes

LUSEOF Use of emulsion prevention chemicals

LOTHER Other

O Series - Operation Control

OMONIT Monitoring sewer effluents

OOTHER Other

WASTEWATER TREATMENT UNIT OPERATIONS

P Series - Physical Pretreatment

PEQUAL Equalization PSCREE Screening

Pre-aeration PSEDIM Sedimentation

PFLOAT Flotation

PTEMPE Temperature control

POTHER Other

C Series - Chemical Pretreatment

CNEUTR Neutralization

CCOAGU Primary chemical coagulation

CCHEMI Chemical treatment

CODORC Odor control

CNUTRI Nitrient addition

COTHER Other

B Series - Biological Treatment

BSTABL) Stabilization basins

BACTIV Activated sludge

BTRICK Trickling filter

BAERAT , Aerated lagoon

BANERO Anerobic contact (6 to 12 hours)

BA POND Anerobic pond (3 to 30 days)

BDENIT Denitrification

BSOLID Aerobic or anerobic digestion of solids

BOTHER Other

S Series - Sludge Handling

STHICK Thickening

SLACOO Lagooning or drying bed

SCENTR Centrifugation
SVACUM Vacuum filtration

SDRYCO Dry combustion

SWETCO Wet combustion

SLANDD Land disposal

SEADIS Sea disposal

SOTHER Other

TS Series - Terminal Secondary Treatment

TSBIOL Biological sedimentation

TSEDIM Final chemical coagulation and sedimentation

TSANDF Sand filtration

TSDIAT Diatomite filtration

TSCHLO Chlorination

TSOTHE Other

ADVANCED WASTE TREATMENT

T Series - Temperature Change Processes

TEVAPO Evaporation

TFREEZ Freezing

TDISTI Distillation

TEUTEC Eutectic freezing

TWETOX Wet oxidation

TPROCE Process residue, handling and disposal

TOTHER Other

M Series - Miscellaneous

MADSOR Adsorption

MELECT Electrodialysis

MIONOX Ion exchange

MSOLVE Solvent extraction

MREVER Reverse osmosis

MFOAMI Foaming

MTREAT Electrochemical treatment

MOTHER Other

W Series - Treated Wastewater Disposal

WCONTR Controlled discharge

WSURFA Surface storage and evaporation

WDEEFW Deepwell disposal

WSPRAY Surface (spray) irrigation

WOCEAN Ocean disposal

WDISCH Surface discharge

WOTHER Other

- Item 22. For each of the four parameters listed on the left side, enter in the appropriate box the value or code word answer called for. Each parameter has been assigned units as specified. If you report in the specified units, make no changes. If you choose to use different units, follow the directions below:
 - a. To report flow in Million Gallons Per Day (MGD) or Gallons per Minute (GFM), line out the numbers 00056 and insert 50050 or 00058 respectively below the printed numbers.
 - b. To report temperature in degrees Centigrade, line out the printed numbers and insert 74026 below the printed numbers for Winter and 74025 for Summer.

"pH" is a measurement of the water's acidity, which should be reported in standard one or two digit units. It can easily be determined using standard and readily available methods, such as litmus paper. Where necessary, the District Engineer may require more detailed testing methods.

Many applicants, before using their intake water, find it necessary to treat it in some fashion. Where such treatment occurs, columns (1) and (2) ("Untreated Intake Water" and "Treated Intake Water") must both be filled in. Specify in column (1) the flow, pH and temperature of the water entering the plant before any preliminary water treatment and in column (2) the flow, pH and temperature of the process water after any preliminary water treatment. If there is no preliminary water treatment, response only to column (2) is mandatory, since the information in both columns would be identical.

Values or code word descriptions, as appropriate, should be filled in for each parameter in columns (3), (4), (5), (6), and (7). Columns (3) and (4) and (5) refer to the water discharged from the plant. Columns (6) and (7) refer to sampling frequencies and methods.

- Column (3) Enter average daily value when discharge is occurring.
- Column (4) Enter minimum value expected in operating year.
- Column (5) Enter maximum value expected in operating year.
- Column (6) Enter frequency of sampling that was used to determine reported value as follows:

Enter DYLY if sampling was daily.
Enter WKLY if sampling was weekly.
Enter MNLY if sampling was monthly.
Enter OTHR if sampling was another frequency - indicate in remarks what that frequency was.

- Column (7) This column is for reporting the use of continuous monitoring. Enter one of the following for each parameter:
- REC if the parameter is continuously monitored <u>and</u> its value recorded.
- MON if the parameter is continuously monitored but its value is not recorded.
- ABS if continuous monitoring is not employed.
- Item 23. The contents of a waste discharge must be indicated by notations following each of the parameters listed in this item. If the continual or occasional presence of that parameter is known or suspected, check the PRESENT box. If its presence is neither known nor suspected check the ABSENT box. When doubt exists regarding the meaning or identity of a particular parameter, enter a question mark (?) in the PRESENT column, and confer with the Regional Office of the Environmental Protection Agency or the District Office of the Corps of Engineers.
- Item 24. All known hazardous or potentially hazardous materials in each plant should be inventoried, in order to insure that there is no possibility that such material may enter the discharge. In Item 24(a), check whether this inventory has been performed. In Item 24(b), if the answer to Item 24(a) was yes, then check whether or not steps have been taken to insure that such materials do not enter the discharge.
- Item 25. The remarks space may be used as necessary to explain particular answers supplied to any of the items above.

The replies supplied to the items discussed above complete the basic reporting requirements which are required of all applicants. The rest of ENG FORM 4345-1 is designated "Part A," and need be filled out only by those applicants whose discharge results from an activity which is included within any of the Standard Industrial Classification code (SIC) categories listed on page 3 of ENG FORM 4345-1. If the activity does not fall in that list you are not required to complete Part A and are only required to complete Sections I and pages 1 through 3 of Section II.



INSTRUCTIONS FOR PART A
(Pages 4 and 5 of ENG FORM 4345-1)

The information required in Part A is to be based on sampling that you believe will result in representative values of the contents of your activity's discharge. Good faith attempts to provide such representative values which inadvertently result in erroneous results will not be penalized.

The applicant must report all required parameter values. Table A contains all parameters with their accuracy levels, test descriptions and references. The parameter values can be determined either by use of one of the standard analytical methods as described in Table A or by other accepted techniques. If the test used is not one shown in Table A, the test procedure should be referenced in "Remarks" or on a separate sheet. If it is certain that one or more of the required parameters is not present in the initial untreated or treated process water and/or the discharge, enter an "A" (meaning "absent") in the appropriate space.

In the upper right hand corner of the form in the box marked "Discharge Serial No." enter the serial number for the discharge covered by this description. This number should be the same as that entered for this discharge in Item 6 above.

The standard reference works listed in the columns of Table A

1. Standard Methods for the Examination of Water and Wastewaters, 13th Edition, 1971 American Public Health (27) Association, New York, New York 10019.

- 2. A.S.T.M. Standards, Part 23, Water; Atmospheric Analysis, 1970, American Society for Testing and Materials, Philadelphia, Pennsylvania 19103.
- 3. W.Q.O. Methods for Chemical Analysis of Water and Wastes, April 1971, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, Ohio 45202.

Copies of the publications are available from the above sources, or for review in the District Engineers Offices and the Regional Offices of the Environmental Protection Agency.

Column (1) of Part A describes the water entering the plant before any preliminary water treatment. Enter average daily concentration in milligrams per liter (mg/l).

Column (2) describes the water entering the process after any preliminary water treatment. Enter average daily concentration in mg/1.

Column (3) Maximum Concentration - Enter maximum concentration actually observed or estimated in the discharge in mg/l.

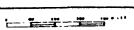
Column (4) Maximum pounds/day/process unit - Enter maximum pounds per day per process unit in discharge. Process unit is defined as the unit used in describing either the principal product or principal raw material in Items 13 or 15 of Section II. Indicate in Remarks which one was used.

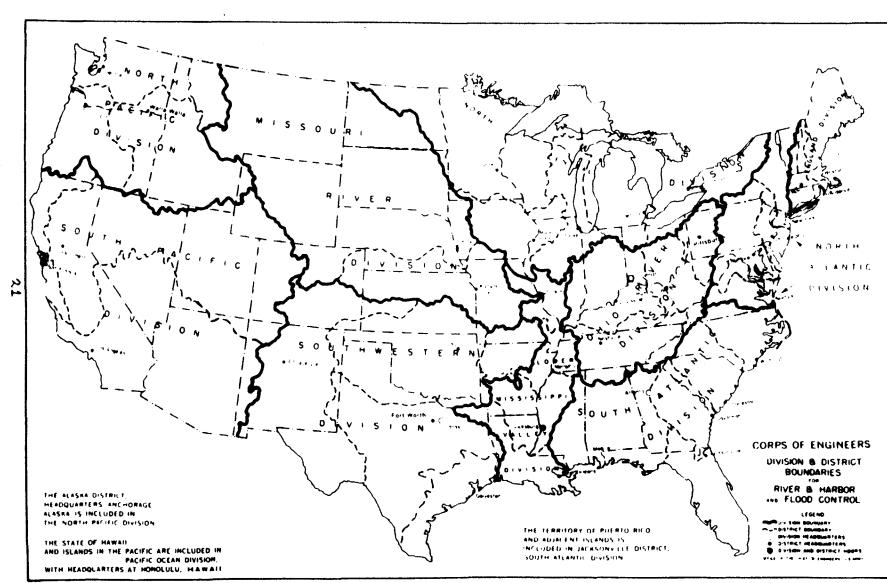
& with

- Column (5) Maximum pounds/day Enter the maximum amount (in pounds) in discharge in any day when plant is in operation.
- Column (6) Daily Average Concentration Enter average daily (when plant is in operation) discharge value in mg/1.
- Column (7) Average pounds/day Enter the daily average amount (in pounds) in discharge when plant is operating.
- Columns (8), (9), (10), and (11) describe sampling methods and frequencies.
- Column (8) Sample Type-Enter one of the following:
 - AVER for average grab sample COMP for composite sample
 - CONT for continuous sample
- Column (9) Enter frequency of sampling that was used to determine the reported value as follows:
 - Enter DYLY if sampling was daily
 - Enter WKLY if sampling was weekly
 - Enter MNLY if sampling was monthly
 - Enter OTHR if sampling was another frequency. Indicate in remarks what that frequency was.
- Column (10) Method of Analysis Enter standard used to determine the reported value (Standard Methods, ASTM, FWQA, or other).
- <u>Column (1)</u> This column is for reporting whether or not continuous monitoring is employed. Enter one of the following for each parameter.
 - REC if the parameter is continuously monitored but its value recorded.
 - M9N if the parameter is continuously monitored but its value is <u>not</u> recorded.
 - ABS if the paratmeter is not continuously monitored.

This is the end of Part A.

S





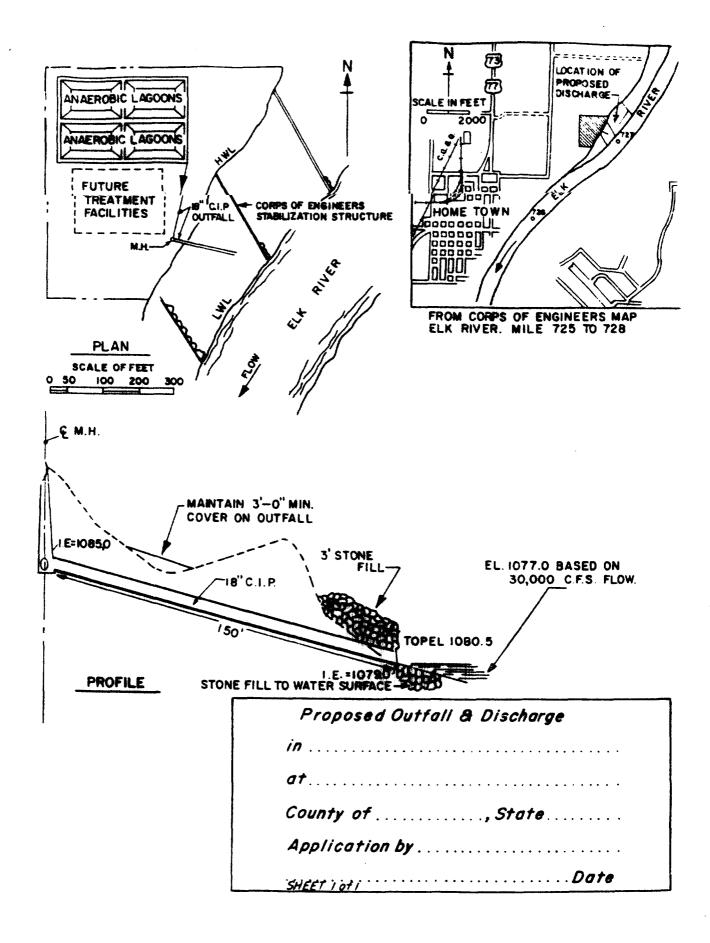
FIELD OFFICES OF THE U.S. ARMY CORPS OF ENGINEERS Directly Responsible for Processing Refuse Act Permit Applications

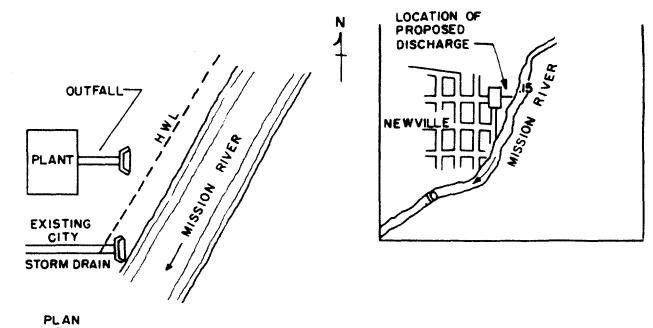
- U. S. Army Engineer District 668 Federal Office Building Memphis, Tennessee 38103
- U. S. Army Engineer District 210 North 12th Street St. Louis, Missouri 63101
- U. S. Army Engineer District 700 Federal Bldg. 601 E. 12th Street Kansas City, Missouri 64106
- U. S. Army Engineer Division 424 Trapclo Road Waltham, Massachusetts 02154
- U. S. Army Engineer District 26 Federal Plaza New York, New York 10007
- U. S. Army Engineer District
 U. S. Custom House
 2nd & Chestnut Street
 Philadelphia, Pennsylvania 19106
- U. S. Army Engineer District 219 S. Dearborn Street Chicago, Illinois 60604
- U. S. Army Engineer District Clock Tower Bldg. Rock Island, Illinois 61201
- U. S. Army Engineer District P. O. Box 7002 Anchorage, Alaska 99501
- U. S. Army Engineer District 1519 Alaskan Way South Scattle, Washington 98134
- U. S. Army Engineer District P. O. Box 2127 Huntington, West Virginia 25721

- U. S. Army Engineer District P. O. Box 60267 New Orleans, Louisiana 70160
- U. S. Army Engineer District P. O. Box 60 Vicksburg, Mississippi 39180
- U. S. Army Engineer District 7410 USPO & Courthouse 215 North 17th Street Omaha, Nebraska 68102
- U. S. Army Engineer District P. O. Box 1715 Baltimore, Maryland 21203
- U. S. Army Engineer District 803 Front Street Norfolk, Virginia 23510
- U. S. Army Engineer District 1776 Niagara Street Buffalo, New York 14207
- U. S. Army Engineer District P. O. Box 1027 Detroit, Michigan 48231
- U. S. Army Engineer District 1210 USPO & Custom House St. Paul, Minnesota 55101
- U. S. Army Engineer District P. O. Box 2946 Portland, Oregon 97208
- U. S. Army Engineer District Bldg 602, City-County Airport Walla Walla, Washington 99362
- U. S. Army Engineer District P. O. Box 59 Louisville, Kentucky 40201

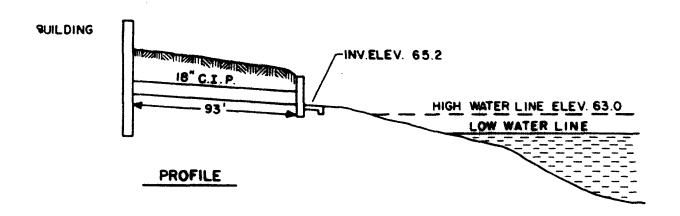
- U. S. Army Engineer District P. O. Box 1070 Nashville, Tenn. 37202
- U. S. Army Engineer District P. O. Box 919 Charleston, S. C. 29402
- U. S. Army Engineer District P. O. Box 2288 Mobile, Alabama 36601
- U. S. Army Engineer District P. O. Box 1890 Wilmington, N. C. 28401
- U. S. Army Engineer District 650 Capitol Mall Sacramento, Calif. 95814
- U. S. Army Engineer District P. O. Box 1580 Albuquerque, New Mexico 87103
- U. S. Army Engineer District P. O. Box 1229 Galveston, Texas 77550
- U. S. Army Engineer District P. O. Box 61 Tulsa, Oklahoma 74102

- U. S. Army Engineer District Federal Building 1000 Liberty Avenue Pittsburgh, Pennsylvania 15222
- U. S. Army Engineer District P. O. Box 4970 Jacksonville, Florida 32201
- U. S. Army Engineer District P. O. Box 889 Savannah, Georgia 31402
- U. S. Army Engineer District P. O. Box 2711 Los Angeles, Calif. 90053
- U. S. Army Engineer District 100 McAllister Street San Francisco, Calif. 94102
- U. S. Army Engineer District P. O. Box 17300 Fort Worth, Texas 76102
- U. S. Army Engineer District P. O. Box 867 Little Rock Arkansas 72203
- U. S. Army Engineer Division Bldg 96, Fort Armstrong Honolulu, Hawaii 96813





SCALE 1" = 200"



Proposed Discharge	
in	
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Application by	y
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